Natural
Health Protection

The Power of Nature in Your Hands

VITAFOL™

ND Pharma & Biotech

Science for Nutrition Health

Product Benefits

- 7 times more bioavailable than folic acid.
- Not affected by MTHFR polymorphism.
- More efficient inner erythrocyte folate content.
- Improvement of homocysteine metabolism.

In foods, approximately 80% of folates are in the form polyglutamates (present in various forms according to its oxidation state and substitution), which during digestion and metabolism are reduced to dihydrofolate (DHF) or tetrahydrofolate (THF). The liver is the best source because folates is the most active form , 5 - metilTHF3 .

Folic acid, understood as pteroylmonoglutamic acid, is fully oxidized and that is the synthetic form that normally appears in supplements and enriched or fortified foods. But never in significant amounts naturally.

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When we intake the synthetic form or other folates, our body should make an important effort in order to metabolize it, completing four different stages before reaching its biologically active form, known as L-methyl (L-methyltetrahydrofolate).
The last stage of these four reactions and biotransformation is regulated by the enzyme called methylenetetrahydrofolate reductase (MTHFR).

Individuals with genetic polymorphisms of the specific gene responsible for coding the MTHFR C677T, may not be able to use or properly metabolize folates.
It´s estimated that between 10-20% of the general population may have inherited two copies (homozygous TT) of the abnormal gene. Another estimated 40-60% of the population may have inherited only one copy (heterozygous CT).

In these polymorphisms MTHFR enzyme seems to work in a limited way, converting only a small part of folates and folic acid into L-methylfolate2.

Those affected by this condition will need to increase the consumption of folates in foods or supplementing the diet with L-methyl forms, but never ingesting synthetic folic acid in high doses, mostly because this form of folic acid may not be active within the body and could possibly to became accumulated with different negative health consequences.

Folic acid acts as a coenzyme in:

- Different events related to the synthesis of nucleic acids.
- Metabolism and protein synthesis (with vitamin C and B12).
- Production of red blood cells, DNA synthesis and tissue growth.
- Also plays an important role in cardiovascular, cerebrovascular and nervous health system by decreasing excess homocysteine.

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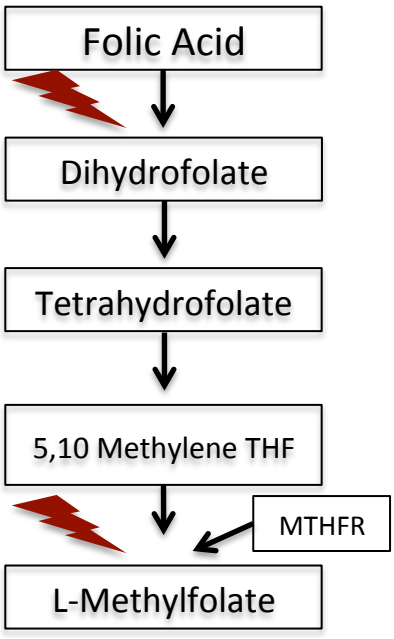

INGESTION

ABSORPTION

VITAFOL ™

L-Methylfolate

Critical enzymatic reaction limiting Folic Acid activation.

1.-Bailey, L. B. and J. F. Gregory, 3rd (1999). "Polymorphisms of ethylenetetrahydrofolate reductase and other enzymes: metabolic significance, risks and impact on folate requirement." J Nutr 129(5): 919-922.

2.- J. Scott : Methyltetrahydrofolate: The Superior Alternative to Folic acid. Nutraceuticals in health and disease prevention, 2001; 75-90 [Krämer K, Hoppe PP and Packer L, editors]. New York: Marcel Dekker Inc.

3.- Vahteristo L. Food folates and their analysis: Determination of folate derivates and their stability by high-perfomance liquid chromatography. Department of Aplplied Chemistry and Microbiology. Doctoral Thesis. University of Helsinki. 1998. Pp. 12-19.

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25 YEARS Of SHARED INNOVATION

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